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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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09/082,663 05/21/98 SOLOMON

R 97125

EXAMINER

LM01/1223

LSI LOGIC CORPORATION
PATENT LAW DEPARTMENT
1551 MC CARTHY BLVD., MS: D-106
MILPITAS CA 95035

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ART UNIT

PAPER NUMBER

2763

DATE MAILED:

12/23/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/082,663

Applicant(s)

SOLOMON, RICHARD L.

Examiner

Kyle J Choi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 1998.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 May 1998 is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☐ received.
2. ☐ received in Application No. (Series Code / Serial Number) _____.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 14) ☒ Notice of References Cited (PTO-892)
- 15) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 16) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 17) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 18) ☐ Notice of Informal Patent Application (PTO-152)
- 19) ☐ Other:

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DETAILED ACTION

1. The following is an initial Office Action upon examination of the above-identified application. Claims 1-40 are pending in this application.

Drawings

2. The drawings have been objected to by the Draftsperson for the reasons stated on the PTO Form 948 attached hereto.

Specification

3. The specification is objected to for the following minor informalities:

- a. Page 1, lines 17-18, the phrase starting with "Multitasking operating systems...." is awkward. There seems to be words or phrases missing.
- b. Page 3, line 5, "and the added" is grammatically incorrect.

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Claim Objections

4. The following claims are objected to for the indicated minor informalities:

- a. Claim 5, line 2, "to response" should either be --to respond-- or --in response--.
- b. Claim 8, line 4, --when-- or --after-- should be inserted between "signal" and "a".
- c. Claim 10, line 1, "response" should be --respond--.
- d. Claim 14, line 8, --when-- or --after-- should be inserted between "signal" and "a".
- e. Claim 18, line 3, "the a" is improper. Only one article should be used. It is suggested that "a" should be used and "the" deleted since "device" does not yet have antecedent basis.
- f. Claim 18, line 6, --when-- or --after-- should be inserted between "signal" and "a".
- g. Claim 27, line 10, --is-- should be inserted after "device".
- h. Claim 35, line 6, --when-- or --after-- should be inserted between "signal" and "a".

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Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 35-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In particular, claim 35 recites a "computer usable medium". The recitation is vague such that it is not clear if the medium is usable by the computer or the computer is usable by the medium. A more common phrase used is "computer-readable medium", but since the applicant is his or her own lexicographer, clarification of "a computer usable medium" is requested.

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Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 8, 10, 11, 13, 18, 26, 30, 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Beckman et al.

Beckman et al. (US Pat. No. 4,340,965) teaches a method and apparatus for detecting a request to access the peripheral device, beginning a timing sequence, and when the device does not answer within a time out period, sends out a predetermined signal. (See at least the abstract).

9. Claims 1-26, 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Windows 95[®] operating system (herein referred to as "Win95"). In particular, all of the claims are broad enough to encompass the "plug-and-play" methodology of Win95. All the limitations recited in the claims, when interpreted as broadly as reasonable, do not recite any

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limitations specific enough to distinguish over typical communications between the main processor and I/O controllers/drivers in a typical computer system/network.

For instance, claim 1 recites detecting a signal on a bus indicating access to a peripheral device. Such a step is performed in all computer systems. The next step recites monitoring the bus for a response by the device. Again, such a method is performed in all computer systems. The last step recites sending a "response" to the signal if there is no answer. Again, such a method is performed in all computer systems, such as a "printer not ready" message from a printer driver, for example. More particularly, if a request to print a document is made in Win95 and the printer is not present, the printer driver will detect that the printer is not available and after a certain period of time, a "response" to the request to print will be submitted to the main processor which issues a "printer not ready" message to the user. This message can be a busy signal if the printer is not set to spool - i.e., set to print as the print command is issued without dumping the document into a queue for later printing.

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Furthermore, any signal generated by a device driver, for example, is a "pre-selected data sequence", since any data in any sequence is "pre-selected" if it is a programmed response. The rest of the rejected claims are similarly recited to claim 1.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over any one of Blackborow et al., Emerson et al., and Hartung et al., in view of Beckman et al.

Blackborow et al. (US Pat. No. 5,297,067) submitted by the applicant discloses an electronic hot plug connector for an SCSI system, including a stand-in SCSI interface 30 which mimics the disk cartridge 16 when it is not plugged in. (See at least the

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abstract). It does not teach waiting for a time out period before mimicking because there is a sensor that detects whether the disk cartridge 16 is present or not.

Emerson et al. (US Pat. No. 5,898,861) discloses a transparent keyboard hot plug system that includes a virtual keyboard unit 170 which mimics the functionality of a keyboard when the keyboard is not plugged in. Although this system does not teach monitoring an SCSI bus, it would have been obvious for one of ordinary skill in the art to have expanded the use of virtual machines to mimic devices plugged into any bus (e.g., SCSI) since virtual machines are software programs adapted for any environment. However, it also does not teach waiting for a time out period before mimicking because there is a sensor that detects whether the keyboard is present or not.

Hartung et al. (US Pat. No. 5,920,709) discloses a bus interface device 30 for IDE devices to mimic an ATA or ATAPI device when such a device is not plugged into the system. (See at least the abstract and Figure 2). Although Hartung et al. does not specifically teach the bus being an SCSI interface bus, it is well known to one of ordinary skill in the art that IDE

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controller bus is similar to SCSI interface bus and therefore can easily be adapted for such use. (See Blackborow et al. above). Hartung et al. also fails to teach waiting for a time out period before mimicking because there is a sensor that detects whether the device is present or not.

All three references use a sensor to detect whether the missing peripheral is plugged in and issues an interrupt or other suitable signals to the device driver to let its presence known. It is common knowledge that such a scheme reduces the lag time between a request sent to the missing device and a response from the device driver alerting of its missing status. Indeed, Beckman et al. as applied above in the \$102 rejection, teaches that it is old knowledge to use a time out period to alert the main processor of a faulty status of the requested device. Hence, it would have been obvious for one of ordinary skill in the art to have used a time out period after a request to determine whether a device is present or not and allowing any one of the mimicking devices of Blackborow et al., Emerson et al., and Hartung et al. to begin its mimicking process.

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Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Martin et al. (US Pat. No. 5,442,305) discloses an active bus termination device that mimics missing peripherals for testing.
- Jeffries et al. (US Pat. No. 5,664,119) discloses a local proactive hot swap request/acknowledge system.
- Bonola (US Pat. No. 5,717,903) discloses a method and apparatus for emulating a peripheral device.
- Wilhelm (US Pat. No. 5,761,033) discloses a computer system with externally connectable I/O controllers for peripheral devices.
- Chidester (US Pat. No. 5,946,469) discloses a computer system with a controller that mimics a peripheral device during boot up.

13. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

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or faxed to:

(703) 308-9051 (for formal communications intended for entry)

or:

(703) 308-1396 (informal or draft communications labeled "PROPOSED" or "DRAFT")

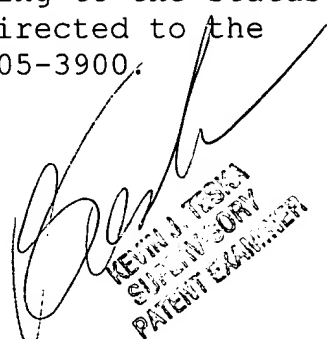
Hand delivered responses should be brought to Crystal Park
2, 2121 Crystal Drive, Arlington, VA., 6th floor receptionist.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kyle Choi whose telephone number is (703)306-5845. The examiner can normally be reached on Monday-Friday, 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Teska can be reached on (703)305-9704. The fax phone number for the organization where this application or proceeding is assigned is (703)308-1396 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

K.C.
12/19/99


KEVIN J. TESKA
SUPERVISOR
PATENT EXAMINER